Ref.

OPINIONS AND DECLARATIONS RENDERED BY THE INTER-NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E. Secretary to the Commission

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OPINION 321

Addition to the Official List of Specific Names in Zoology of the specific name striatoradiatus Leske, 1778, as published in the combination Spatangus striato-radiatus, the oldest available name for the fossil Echinoderm from the Limburg Cretaceous (Maestrichtian) commonly known as the Spatangue de Maestricht (Class Echinoidea)

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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 321

A. The Officers of the Commission

Honorary Life President: Dr. Karl Jordan (British Museum (Natural History), Zoological Museum, Tring, Herts., England).

President: (Vacant).

Vice-President: Senhor Dr. Afranio do Amaral (Sao Paulo, Brazil).

Secretary: Mr. Francis Hemming (London, England).

B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do Amaral (S. Paulo, Brazil) (Vice-President) (1st January 1944).

Professor J. R. Dymond (University of Toronto, Toronto, Canada) (1st January 1944).

Professor J. Chester Bradley (Cornell University, Ithaca, N.Y., U.S.A.) (28th March 1944).

Professor Harold E. Vokes (Johns Hopkins University, Baltimore, Maryland, U.S.A.) (23rd April 1944).

Dr. William Thomas Calman (Coulsdon, Surrey, England) (1st January 1947). Professor Béla Hankó (Békéscsaba, Hungary) (1st January 1947).

Dr. Norman R. Stoll (Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.) (1st January 1947).

Professor H. Boschma (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) (1st January 1947).

Senor Dr. Angel Cabrera (Eva Peron, F.C.N.G.R., Argentina) (27th July 1948). Mr. Francis HEMMING (London, England) (Secretary) (27th July 1948).

Dr. Joseph Pearson (Tasmanian Museum, Hobart, Tasmania, Australia) (27th July 1948).

Dr. Henning Lemche (Universitetets Zoologiske Museum, Copenhagen, Denmark) (27th July 1948).

Professor Teiso Esaki (Kyushu University, Fukuoka, Japan) (17th April 1950).

Professor Pierre Bonnet (Université de Toulouse, France) (9th June 1950).

Mr. Norman Denbigh RILEY (British Museum (Natural History), London) (9th June 1950).

Professor Tadeusz Jaczewski (Department of Systematic Zoology, Warsaw University, Warsaw, Poland) (15th June 1950).

Professor Robert Mertens (Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany) (5th July 1950).

Professor Erich Martin Hering (Zoologisches Museum der Humboldt-Universität zu Berlin, Germany) (5th July 1950).

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OPINION 321

ADDITION TO THE "OFFICIAL LIST OF SPECIFIC NAMES IN ZOOLOGY" OF THE SPECIFIC NAME "STRIATORADIATUS" LESKE, 1778, AS PUBLISHED IN THE COMBINATION "SPATANGUS STRIATORADIATUS", THE OLDEST AVAILABLE NAME FOR THE FOSSIL ECHINODERM FROM THE LIMBURG CRETACEOUS (MAESTRICHTIAN) COMMONLY KNOWN AS THE "SPATANGUE DE MAESTRICHT" (CLASS ECHINOIDEA)

RULING:—(1) The under-mentioned specific name is hereby placed on the Official List of Specific Names in Zoology as Name No. 200:—striatoradiatus Leske, 1778, as published in the combination Spatangus striato-radiatus (a senior objective synonym of radiatus Gmelin, [1791], as published in the combination Echinus radiatus, the name of the type species of Hemipneustes Agassiz (J.L.R.), 1836).

- (2) The under-mentioned invalid or reputed but non-existent specific names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology as Names Nos. 104 and 105 respectively:—(a) radiatus Gmelin, [1791], as published in the combination Echinus radiatus (a junior objective synonym of striatoradiatus Leske, 1778, as published in the combination Spatangus striato-radiatus); (b) scutatus Knorr, 1768, in the combination Echinocerus scutatus (a reputed but non-existent name).
- (3) The under-mentioned generic name is hereby placed on the Official List of Generic Names in Zoology as

Name No. 766: Hemipneustes Agassiz (J.L.R.), 1836 (gender: feminine) (type species, by monotypy: Echinus radiatus Gmelin, [1791]) (a nominal species, the specific name of which is a junior objective synonym of striatoradiatus Leske, 1778, as published in the combination Spatangus striato-radiatus).

(4) The under-mentioned reputed but non-existent generic names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology as Names Nos. 182 to 184 respectively:—(a) Spatagoides Klein, 1778; (b) Spatagoides Leske, 1778; (c) Spatangoida Gmelin, [1791].

I.—THE STATEMENT OF THE CASE

On 8th April 1946 Professsor H. Engel (Zoologisch Museum, Amsterdam, The Netherlands) submitted a request for a ruling as to the oldest available specific name for the fossil sea urchin of the Limburg Cretaceous (Maestrichtian) commonly known as the "Spatangue de Maestricht". As explained by Professor Engel in the supplementary note reproduced in paragraph 4 of the present Opinion, the form of this application was revised in 1950. The application so revised was as follows:—

On the question of the correct scientific name for the Echinoderm fossil from the Limburg Cretaceous (Maestrichtian) commonly known as the "Spatangue de Maestricht" (Class Echinoidea, Order Spatangoidea)

By H. ENGEL

(Zoologisch Museum, Amsterdam, The Netherlands)

1. In a paper entitled "Over de variatie van Hemipneustes striatoradiatus (Leske)" published in 1945 (Verhandl. Geol-Mijnbouwk. Genootsch. Nederland en Kolon. (Geol. Ser.) 14: 173—182)

- I discussed the status of the name of the common and well known fossil sea-urchin from the Limburg Cretaceous (Maestrichtian) so aptly designated by the French as "Spatangue de Maestricht". My conclusion was that the modern use by palaeontologists for this species of the generic name Spatagoides was incorrect under the Règles, as also was the use of the specific trivial name radiatus. The first name published for this species was Spatangus striatoradiatus Leske, 1778; the oldest generic name available for this species according to current taxonomic ideas was Hemipneustes Agassiz, 1836; the correct name for this species was therefore Hemipneustes striatoradiatus (Leske, 1778).
- 2. The generic name Hemipneustes Agassiz, 1836, was in general use for this species until Lambert & Thiéry (Essai de Nomenclature raisonnée des Echinides, (fasc. 6/7): 411) substituted for it the name Spatagoides Klein, 1778. Lambert remarks in his "Révision des Echinides fossiles de la Catalogne" (1927, Mem. Mus. Cienc. nat. Barcelona (Ser. Geol.) 1: 42) that the name Spatagoides was adopted by Bayle as far back as 1878 (Explic. Carte géol. France 4 (Atlas)), while he himself had given in 1917 the arguments in favour of the use of this name in place of Hemipneustes in his "Note sur quelques Holasteridae" (Bull. Soc. Sci. hist. nat. Yonne 70: 196). The lastmentioned publications are not available to me but the grounds on which Lambert based his conclusions are quite clear from the statements made in the paper which he published in 1924 (loc. cit.) jointly with Thiery. The argument was: (1) that Klein in his Naturalis Dispositio Echinodermatum published in 1734 used (: 35) the generic name Spatagoides for a species which he called Spatagoides andersonii and which he figured on his plate XXV from a specimen of the "Spatangue de Maestricht" from Bemelen near Maestricht collected in 1715; (2) that Leske in 1778 conferred availability as from that date on Klein's names by republishing that author's *Naturalis Dispositio*. It is quite clear that in this new edition Leske did not reinforce Klein's names "by adoption and acceptance" (*Opinion 5*) and therefore that the republication of these names in this way did not confer any availability on them under the *Règles*; I do not consider it necessary to argue this point in detail, for it was fully considered by the International Commission on Zoological Nomenclature in 1948 in connection with the generic name Arachnoides, another of Klein's 1734 names which it was desired to make available as from Leske, 1778. The Commission then took the view that, in order to secure this end, it was necessary for it to use its Plenary Powers expressly to validate the name *Arachnoides*, its publication in 1778 in Leske's reprint of Klein's work having conferred no availability upon it (1950, *Bull. zool. Nomencl.* 4: 530—536).
- 3. The position is therefore that, under the Règles the name Spatagoides, originally of Klein, 1734, acquired no availability in virtue of the republication by Leske in 1778 of Klein's Naturalis

Dispositio. Among the synonyms quoted by Lambert & Thiéry (1924: 411) is the alleged generic name *Spatangoida* attributed by those authors to Gmelin, [1791] (in Linnaeus, Syst. Nat. (ed. 13) 1 (6): 3197); but this term was used by Gmelin only to indicate that it had been employed by Klein for the group of species dealt with on page 3197. This term was not "reinforced" by Gmelin "by adoption or acceptance" (Opinion 5) and accordingly acquired no availability by reason of having been republished in this way. It therefore has no existence as a generic name. The next name to be considered is *Hemipneustes* Agassiz, 1836 (Mém. Soc. Sci. nat. Neuchatel 1:183); this is a validly published name, the nominal genus so named having, as its type species by monotypy, the nominal species *Hemipneustes radiatus*; this name was not published by Agassiz as a new name but was attributed by him to Lamarck, by whom the trivial name radiatus had been employed in the binominal combination Spatangus radiatus (1816, Anim. sans Vertèbr. 3:33). When however we turn to Lamarck, we find that he in turn was not the author of the trivial name radiatus, which he attributed to Gmelin, by whom it was published in the binominal combination Echinus radiatus (Gmelin, [1791], in Linnaeus, Syst. Nat. (ed. 13) 1 (6): 3174). Finally, we find that Gmelin himself did not regard the trivial name radiatus as a new name but merely as an emendation of the name striatoradiatus as published by Leske in 1778 in the binominal combination Spatangus striatoradiatus (Leske, 1778, Addit. Klein. nat. Disp. Ech.: 234) (also on page 170 in the edition which does not include the reprint of Klein). The species so named by Leske, and therefore also the species referred to by Agassiz in 1836 under the name Hemipneustes radiatus, is the "Spatangue de Maestricht". As the foregoing was the sole species referred to by Agassiz to the genus Hemipneustes, it is the type species of that genus by monotypy. The generic name *Hemipneustes* Agassiz, 1836, is the oldest available generic name for the "Spatangue de Maestricht", for that species is not congeneric with the species which is the type species of the genus Echinus Linnaeus, 1758, to which it was referred by Gmelin in 1791, while the International Commission has, under its Plenary Powers, suppressed all uses of the generic name Spatangus prior to Gray, 1825, in order to validate the name Spatangus Gray, 1825, with type species Spatagus purpureus Müller (O.F.), 1776, a species not congeneric with the "Spatangue de Maestricht" (1950, Bull. zool. Nomencl. 4:522-530). We arrive therefore at the conclusion that, on the basis of current taxonomic ideas, the correct generic name for the species under consideration is Hemipneustes Agassiz, 1836.

4. As regards the trivial name applicable to this species, we have already seen that in 1778 Leske gave it the name *striatoradiatus*, in the binominal combination *Spatangus striatoradiatus*, and that in 1791 Gmelin, who referred this species to the genus *Echinus* Linnaeus, emended the trivial name given to this species by Leske by shortening it to the form *radiatus*. Goldfuss (G. A.) (1829, *Petref. German*.

- radiatus, but of the references so given one only is prior to the publication in 1778 of the name Spatangus striatoradiatus. This reference was cited by Goldfuss as "Knorr, Petref. tab. E IV n. 41". This is clearly a reference to the work entitled "Die Naturgeschichte der Versteinerungen zur Erläuterung der Knorrischen Sammlung von Merkwürdigkeiten der Natur" by Walch, J. E. I. In volume 2 of the above work there is a description on page 182 of the specimen figured on Plate E IV figs. 1 and 2, but neither on the plate where the number 41 (cited by Goldfuss) refers to four figures (figs. 1—4, of which only figs. 1 and 2 represent the "Spantangue de Maestricht") nor in the text (on page 182) nor on page 28 of Part IV (where a Systema is given) is there any trace of the name Echinocerus scutatus, alleged by Goldfuss to have been used by "Knorr", i.e., by Walch, for the species under consideration. On the contrary, the specimen figured as figs. 1 and 2 on pl. E IV, which was collected in Maestricht, was cited by Walch under the name Spatangus. The only name cited by Walch (but not accepted by him) is from Klein: "Spatagoides quaternis radiis, andersonii". We see therefore that Leske was the first author to apply a trivial name to the "Spatangue de Maestricht".
- 5. In the light of the data given above, we find that the oldest available name for the foregoing species is *Spatangus striatoradiatus* Leske, 1778, that the oldest available generic name for this species is, according to current taxonomic ideas, the name *Hemipneustes* Agassiz, 1836, and therefore that, on the basis of those taxonomic ideas, the correct name, under the *Règles*, for this species is *Hemipneustes striatoradiatus* (Leske, 1778). In view of the misunderstanding and confusion in this matter created by the action by Lambert & Thiéry, it is desirable that these names should now be stabilised by being placed on the *Official Lists* established respectively for generic names and for specific trivial names. The request which I accordingly submit is that the International Commission on Zoological Nomenclature should:—
 - (1) place on the Official List of Generic Names in Zoology the generic name Hemipneustes Agassiz, 1836 (gender of generic name: feminine) (type species, by monotypy: Echinus radiatus Gmelin, [1791]);
 - (2) place on the Official Index of Rejected and Invalid Generic Names in Zoology the under-mentioned reputed but non-existent generic names:—
 - (a) Spatagoides Klein, 1778, Nat. Disp. Ech. (Leske's ed.): 234
 - (b) Spatagoides Leske, 1778, Add. Klein, Nat. Disp. Ech.: 9, 156, 175, 176;

- (c) Spatangoida Gmelin, [1791], in Linnaeus, Syst. Nat. (ed. 13) 1 (6): 3197;
- (3) place on the Official List of Specific Trivial Names in Zoology the trivial name striatoradiatus Leske, 1778, as published in the binominal combination Spatangus striatoradiatus;
- (4) place on the Official Index of Rejected and Invalid Specific Trivial Names in Zoology the under-mentioned invalid or reputed but non-existent specific trivial names:—
 - (a) radiatus Gmelin, [1791], as published in the binominal combination *Echinus radiatus* (an invalid name, being an invalid emendation of the trivial name striatoradiatus Leske, 1778, as published in the binominal combination *Spatangus striatoradiatus*);
 - (b) scutatus Knorr, 1768, in the binominal combination *Echinocerus scutatus* (a reputed but non-existent name).

II.—THE SUBSEQUENT HISTORY OF THE CASE

- 2. Registration of the present application: On receipt of Professor Engel's application in 1946 the problem of the oldest available specific name for the "Spatangue de Maestricht" was allotted the Registered Number Z.N.(S.) 219.
- 3. Postponement of consideration of the present application in Paris in 1948: It had been hoped that it would be possible for the International Commission to reach a decision on this application during its Session in Paris in 1948, and arrangements were made for its submission to the Commission at that Session. The time available in Paris was, however, so short and so much of it was devoted to considering proposals for the amendment, clarification and amplification of the *Règles* that it proved impossible for the Commission to deal with all the applications relating to individual names that were then awaiting attention. The present was one of the applications which for this reason it was impossible to lay before the Commission at that Session.

4. Revision of the present application in 1950: Certain of the decisions taken by the Thirteenth International Congress of Zoology, 1948, automatically called for a few minor adjustments in all applications which had been submitted to the Commission before that Congress and which were still outstanding. For this reason the present application was revised by Professor Engel in 1950 (the year in which the Official Record of the Paris decisions was published). To the application so revised, which is reproduced in the opening paragraph of the present *Opinion*, Professor Engel added (on 9th September 1950) the following explanatory postscript:—

Postscript (dated 9th September 1950): The present application was originally submitted in April 1946 at a time when the Commission had not given any ruling on the availability of generic names originally published by Klein in 1734 on their being republished in 1778 in Leske's post-1757 edition of Klein's Naturalis Dispositio Echinodermatum. In the application, as then submitted, I accordingly set out in detail the grounds on which I asked the Commission to give a ruling that in the foregoing re-issue of Klein's work Leske had not complied with the requirements specified in Opinion 5 and therefore that Klein's names acquired no availability in virtue of being so republished by Leske. I have since revised this application, in view of the fact that this question was the subject of a ruling (in the case of the alleged name Arachnoides Klein or Leske, 1778) by the Commission at its Session held in Paris in 1948. At the same time I have redrafted the form of the application submitted to the Commission, in order to take account of the decisions taken by the Thirteenth International Congress of Zoology to establish both an Official List of Specific Trivial Names in Zoology and also an Official Index of Rejected and Invalid Generic Names and a corresponding Official Index for similar specific trivial names.

- 5. Publication of the present application: The present application, as revised by Professor Engel (paragraph 1 above), with the Postscript of 9th September 1950 (reproduced in paragraph 4 above), was sent to the printer in May 1951 and was published in Part 1 of volume 6 of the Bulletin of Zoological Nomenclature on 28th September of that year (Engel, 1951, Bull. zool. Nomencl. 6:3—6).
- 6. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America: In the following letter dated 6th February 1952 (received 9th April 1952) Professor

G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America, reported that the present application had received the support of the Committee by seven votes to one vote. As the present application does not involve the use of the Commission's Plenary Powers, the problem to be considered in this case is solely one of the application of the normal provisions of the *Règles* and it was not stated in the letter given below on what ground the dissentient member of the Committee considered that the proposition submitted in this case was defective.

The Joint Committee on Zoological Nomenclature for Paleontology in American has considered this subject, and I wish to inform you that, being polled, they voted: To support the petition (seven):—(1) A. Myra Keen; (2) Katherine V. W. Palmer; (3) Bob Schaeffer; (4) John B. Reeside, Jr.; (5) J. Marvin Weller; (6) Bryan Patterson; (7) G. Winston Sinclair. To oppose the petition (one):—Don L. Frizzell.

In so voting several of the members of the Committee (and other members who did not wish to vote) commented on the doubtful necessity for this petition.

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

7. Issue of Voting Paper V.P.(52)41: On 15th May 1952, a Voting Paper (V.P.(52)41) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name for the Echinoderm fossil from the Limburg Cretaceous known popularly as the "Spatangue de Maestricht", as set out in Points (1) to (4) at the foot of page 5 and at the top of page 6 of volume 6 of the Bulletin of Zoological Nomenclature" [i.e., in paragraph 5 of the application reproduced in the first paragraph of the present Opinion].

- **8.** The Prescribed Voting Period: As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 15th August 1952.
- 9. Particulars of the Voting on Voting Paper V.P.(52)41: The state of the voting on Voting Paper V.P.(52)41 at the close of the Prescribed Voting Period was as follows:—
 - (a) Affirmative Votes had been given by the following sixteen (16) Commissioners (arranged in the order in which Votes were received):

Hering; Calman; Dymond; Hankó; Bonnet; Vokes; do Amaral; Pearson; Bradley; Hemming; Esaki; Riley; Lemche; Cabrera; Stoll; Boschma;

(b) Negative Votes:

None;

(c) Voting Papers not returned, two (2):

Jaczewski; Mertens.

10. Declaration of Result of Vote: On 16th August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)41, signed a Certificate that the Votes cast were as set out in paragraph 9 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

- 11. On 24th April 1954 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)41.
- 12. The following are the original references for the names placed on *Official Lists* and *Official Indexes* in the Ruling given in the present *Opinion*:—

Hemipneustes Agassiz (J.L.R.), 1836, Mém. Soc. Sci. nat. Neuchâtel 1: 183—184

radiatus, Echinus, Gmelin, [1791], in Linnaeus, Syst. Nat. (ed. 13) 1 (6): 3174

scutatus, Echinocerus, Knorr, 1768, in Walch, Naturgesch. Versteinerung. z. Erlauterung. Knorr. Samml. 2:182, pl. E. IV. figs. 1, 2

Spatagoides Klein, 1778, Nat. Disp. Ech. (Leske's Ed.): 234
Spatagoides Leske, 1778, in Klein, Nat. Disp. Ech. (new Ed.): 234
Spatagoida Gmelin, [1791], in Linnaeus, Syst. Nat. (ed. 13)
1 (6): 3197

- striatoradiatus, Spatangus, Leske, 1778, Addit. Klein. nat. Disp. Ech.: 170 (also in the alternative edition, including the reprint of Klein, i.e., Leske, 1778, in Klein, Nat. Disp. Ech.: 234)
- 13. The nominal genus *Hemipneustes* Agassiz (J.L.R.), 1836, is not the type genus of a family-group taxon and accordingly no question arises in the present case of placing any name on the *Official List of Family-Group Names in Zoology*.
- 14. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were

made in the titles of the Official List and Official Index of such names (1953, Copenhagen Decisions zool. Nomencl.: 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present Opinion.

- 15. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.
- **16.** The present *Opinion* shall be known as *Opinion* Three Hundred and Twenty-One (321) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Fourth day of April, Nineteen Hundred and Fifty-Four.

Secretary to the International Commission on Zoological Nomenclature

FRANCIS HEMMING